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Qualcomm, NC 5775 Morehouse Drive San Diego, CA 92121			MATTIS, JASON E	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,141

Applicant(s)

LEUNG, NIKOLAI K.N.

Examiner

Jason E. Mattis

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/01, 3/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 3-4 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 3-4 are directed to a signal that is not tangibly embodied. To be a statutory claim, the claimed subject matter must convey a process, machine, manufacture, or composition of matter. The “communication signal” of claims 3-4 does not fall into any of these categories.

In order to expedite examination, claims 3-4 are included in the prior art rejections below in anticipation of these claims being amended to overcome the rejection under 35 USC § 101.

Claim Objections

2. Claim 9 is objected to because of the following informalities:

Claim 9 contains the phrase “is adapted to”. This phrase encompasses language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure, does not limit the scope of a claim or claim

limitation. It is recommended that the claim be amended to remove the phrase "is adapted to".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-7, 9-16, 18-20, 22-27, 29-36, 39-44, and 46-50 are rejected under 35 U.S.C. 102(a) as being anticipated by Gagnon et al. (European Patent Application EP 1 024 661 A2).

With respect to claim 1, Gagnon et al. discloses a wireless communication system supporting a broadcast service (**See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to a satellite communication system supporting broadcasting**). Gagnon et al. also discloses transmitting a broadcast session on a broadcast transmission channel (**See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104**). Gagnon et al. further discloses transmitting broadcast overhead information with the broadcast session (**See**

page 8 paragraph 36 of Gagnon et al. for reference to including session description protocol plus (SDP+) records in the broadcast sessions).

With respect to claim 3, Gagnon et al. discloses a communication signal transmitted on a carrier wave (See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to a communication signal transmitted on a carrier wave from a transmission station 102 to a satellite/relay 104 and for reference to the signal being further transmitted from the satellite/relay 104 to a receiver station 106 on another carrier wave). Gagnon et al. also discloses a broadcast session portion (See page 7 paragraph 31 of Gagnon et al. for reference to the signal including a broadcast session). Gagnon et al. further discloses a session description protocol message interleaved with the broadcast session portion, wherein the SDP provides information for processing the broadcast session (See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to a broadcast signal including SDP+ records and for reference to the SDP+ records being used to process the broadcast session).

With respect to claim 5, Gagnon et al. discloses a wireless communication system supporting a broadcast service (See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to a satellite communication system supporting broadcasting). Gagnon et al. also discloses receiving a session description protocol message corresponding to the broadcast session on the broadcast channel (See page 8 paragraph 36 of Gagnon et al. for reference to receiving SDP+ records about a broadcast session on the broadcast channel). Gagnon et al. further discloses

accessing a broadcast session and processing the broadcast session using the SDP message **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to accessing a broadcast session indicated by the SDP+ records and processing the broadcast session using information in the SDP+ records).**

With respect to claim 7, Gagnon et al. discloses a wireless apparatus (See page 7 paragraph 30 and Figure 1 of Gagnon et al. for reference to receiver station 106, which is a wireless apparatus). Gagnon et al. also discloses a means for receiving a broadcast service parameter message corresponding to a broadcast session and a means for receiver an SDP corresponding to the broadcast session **(See page 8 paragraph 36 of Gagnon et al. for reference to receiver station 106 receiving SDP+ records, which are broadcast service parameter messages about a broadcast session on the broadcast channel).** Gagnon et al. further discloses a means for processing the broadcast session using the SDP **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records).**

With respect to claim 12, Gagnon et al. discloses a method for indicating broadcast session protocol (See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol). Gagnon et al. also discloses multiplexing information identifying a broadcast session protocol with a content of the broadcast session to provide a broadcast stream **(See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream).** Gagnon et al. further discloses transmitting

the broadcast stream on a broadcast transmission channel (**See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104).**

With respect to claim 19, Gagnon et al. discloses a method indicating broadcast session protocol (**See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).**

Gagnon et al. also discloses receiving a broadcast stream (**See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream).** Gagnon et al. further discloses determining information identifying a broadcast session protocol in accordance with the received broadcast stream (**See page 8 paragraph 36 of Gagnon et al. for reference to determining SDP+ records, which are records that identify a broadcast session protocol and that are sent with the broadcast stream).** Gagnon et al. also discloses processing the broadcast stream in accordance with the determined information if the receiving station contains the broadcast session protocol (**See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records at the receiving station).**

With respect to claim 23, Gagnon et al. discloses a method indicating broadcast session protocol (**See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).**

Gagnon et al. also discloses multiplexing information identifying a broadcast session protocol with a content of the broadcast session to provide a broadcast stream (**See**

page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream). Gagnon et al. further discloses providing the broadcast stream for transmission **(See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104).**

With respect to claim 34, Gagnon et al. discloses a method indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses receiving a broadcast stream **(See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream).** Gagnon et al. further discloses determining an information element in accordance with the received broadcast stream **(See page 8 paragraph 36 of Gagnon et al. for reference to determining SDP+ records, which are information elements that identify a broadcast session protocol and that are sent with the broadcast stream).** Gagnon et al. also discloses processing the broadcast stream in accordance with the determined information element **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records at the receiving station).**

With respect to claim 39, Gagnon et al. discloses a method for indicating broadcast session protocol **(See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol).** Gagnon et al. also discloses multiplexing allowing broadcast session processing with a

content of the broadcast session to provide a broadcast stream (**See page 8 paragraph 36 for reference to multiplexing SDP+ records with a broadcast session to provide a broadcast stream**). Gagnon et al. further discloses transmitting the broadcast stream on a broadcast transmission channel (**See page 7 paragraph 31 of Gagnon et al. for reference to broadcasting a broadcast session from a transmission station 102 to a receiver station 106 via a satellite/relay 104**).

With respect to claim 47, Gagnon et al. discloses a method indicating broadcast session protocol (**See page 16 paragraph 84 of Gagnon et al. for reference to using SDP+ records to indicate a broadcast session protocol**). Gagnon et al. also discloses receiving a broadcast stream (**See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to receiver station 106 receiving a broadcast stream**). Gagnon et al. further discloses determining information allowing broadcast session processing in accordance with the received broadcast stream (**See page 8 paragraph 36 of Gagnon et al. for reference to determining SDP+ records, which are records that identify a broadcast session protocol for broadcast session processing and that are sent with the broadcast stream**). Gagnon et al. also discloses processing the broadcast stream in accordance with the determined information (**See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to processing the broadcast session using information in the SDP+ records at the receiving station**).

With respect to claim 2, Gagnon et al. discloses that the broadcast overhead information is a SDP message containing information for processing the session (**See**

page 8 paragraph 36 for reference to the overhead being an SDP+ record).

Gagnon et al. also discloses that the SDP message is interleaved with broadcast content **(See page 8 paragraph 36 for reference to the SDP+ records being broadcast on the broadcast channel with the broadcast data meaning they are interleaved with the broadcast content).**

With respect to claim 4, Gagnon et al. discloses that the signal is transmitted via a broadcast transmission channel **(See page 7 paragraphs 29-30 and Figure 1 of Gagnon et al. for reference to transmitting signals on a broadcast transmission channel).**

With respect to claim 6, Gagnon et al. discloses that the SDP message is interleaved with the broadcast content of the broadcast session **(See page 8 paragraph 36 for reference to the SDP+ records being broadcast on the broadcast channel with the broadcast data meaning they are interleaved with the broadcast content).**

With respect to claim 9, Gagnon et al. discloses a memory storage storing the SDP corresponding to a plurality of broadcast session that is updated when the corresponding broadcast session is access **(See page 12 paragraph 61 of Gagnon et al. for reference to SDP+ data store 540 that is a database storing SDP+ record information for multiple broadcast sessions that is updated when a broadcast session is accessed).**

With respect to claim 10, Gagnon et al. discloses that the memory is a cache memory **(See page 12 paragraph 61 of Gagnon et al. for reference to the SDP+**

data store 540 being updated dynamically meaning SDP+ records are cached in the database).

With respect to claim 11, Gagnon et al. discloses that the memory is a look up table (See page 12 paragraph 61, page 17 paragraph 89, and Figures 16A-16D of Gagnon et al. for reference to the memory being indexed by fields including an IP address of the corresponding broadcast session).

With respect to claims 13, 24, and 41, Gagnon et al. discloses multiplexing the broadcast session protocol with the broadcast session at the content server (See page 7 paragraph 31 and Figure 1 of Gagnon et al. for reference to multiplexing broadcast data and control data at the transmitter station 102, which is the content server).

With respect to claims 14, 25, and 42, Gagnon et al. discloses multiplexing the broadcast session protocol with the content of the broadcast session periodically (See page 8 paragraph 36 for reference to multiplexing SDP+ records periodically).

With respect to claims 15, 26, and 43, Gagnon et al. discloses periodically multiplexing with a frequency of multiplexing a short-term encryption key (See page 12 paragraph 64 of Gagnon et al. for reference to multiplexing SDP+ records periodically at the same time as an encryption key).

With respect to claims 16, 27, and 44, Gagnon et al. discloses multiplexing to provide a broadcast stream in accordance with a bandwidth condition (See page 7 paragraph 31 of Gagnon et al. for reference to multiplexing the data together,

which must conform to a maximum allowed bandwidth allocated to each broadcast channel).

With respect to claims 18, 29, and 46, Gagnon et al. discloses multiplexing a broadcast session description identifier with a content of the broadcast session (See page 15 paragraph 79 of Gagnon et al. for reference to multiplexing BARP information with the broadcast data with the BARP information indicating an IP address of a broadcast channel, which is an identifier of the broadcast session).

With respect to claim 20, Gagnon et al. discloses retrieving the broadcast session protocol from a storage media at the receiving station and processing the stream in accordance with the retrieved protocol (See page 12 paragraph 61 of Gagnon et al. for reference to SDP+ data store 540 that is a database storing SDP+ record information for multiple broadcast sessions and for reference to using data retrieved from the data store to process broadcast sessions).

With respect to claim 22, Gagnon et al. discloses determining a broadcast session description identifier of a broadcast session (See page 15 paragraph 79 of Gagnon et al. for reference to determining BARP information from broadcast sessions, with the BARP information indicating an IP address of a broadcast channel, which is an identifier of the broadcast session).

With respect to claim 30, Gagnon et al. discloses forming an information element comprising the broadcast session description identifier (See page 15 paragraph 79 of Gagnon et al. for reference to using BARP information from broadcast sessions, with the BARP information indicating an IP address of a

broadcast channel, which is an identifier of the broadcast session). Gagnon et al. also discloses multiplexing the information element with a content of the broadcast session **(See page 15 paragraph 79 of Gagnon et al. for reference to multiplexing BARP information with the broadcast data).**

With respect to claim 31, Gagnon et al. discloses assigning each unit of the broadcast stream a sequence number **(See page 12 paragraph 64 of Gagnon et al. for reference to each packet including a continuity counter that is contains a sequence number).**

With respect to claim 32, Gagnon et al. discloses delivering each of the units through a media not guaranteeing in-sequence deliver and re-ordering the delivered units in accordance with sequence number **(See page 12 paragraph 64 of Gagnon et al. for reference to using a continuity counter in each packet to re-order packets in the correct order at the receiver when packets are received out of sequence).**

With respect to claim 33, Gagnon et al. discloses establishing a generic routing encapsulation tunnel through a media not guaranteeing in-sequence delivery **(See page 12 paragraph 64 of Gagnon et al. for reference to using a continuity counter in each packet to re-order packets in the correct order at the receiver when packets are received out of sequence through the air/satellite transmission medium).**

With respect to claim 35, Gagnon et al. discloses determining a broadcast session protocol and processing the broadcast session in accordance with the broadcast session protocol **(See page 8 paragraph 36 and page 16 paragraph 84 of**

Gagnon et al. for reference to a broadcast signal including SDP+ records and for reference to the SDP+ records being used to process the broadcast session).

With respect to claim 36, Gagnon et al. discloses determining a broadcast session description identifier **(See page 15 paragraph 79 of Gagnon et al. for reference to determining BARP information with the BARP information indicating an IP address of a broadcast channel, which is an identifier of the broadcast session)**. Gagnon et al. also discloses processing the stream in accordance with a broadcast session protocol corresponding to the identifier **(See page 16 paragraphs 83-88 of Gagnon et al. for reference to processing a stream using an SDP+ record containing a protocol that is indexed by IP address of the broadcast channel)**.

With respect to claim 40, Gagnon et al. discloses multiplexing a broadcast session protocol with broadcast content both before and after a protocol change **(See page 8 paragraph 36 of Gagnon et al. for reference to multiplexing SDP+ records periodically, meaning that the records are included both before and after any protocol change)**.

With respect to claim 48, Gagnon et al. discloses processing the broadcast session in accordance with the determined information **(See page 8 paragraph 36 and page 16 paragraph 84 of Gagnon et al. for reference to a broadcast signal including SDP+ records containing broadcast protocol information and for reference to the SDP+ records being used to process the broadcast session)**.

With respect to claim 49, Gagnon et al. discloses processing the broadcast session in accordance with the determined information if the receiving station contains

the protocol (**See page 8 paragraph 36, page 12 paragraph 61, and page 16 paragraph 84 of Gagnon et al. for reference to a broadcast signal including SDP+ records containing broadcast protocol information and for reference to the SDP+ records being stored in a data store at the receiver station and used to process the broadcast session).**

With respect to claim 50, Gagnon et al. discloses retrieving the broadcast session protocol from a storage media at the receiving station and processing the stream in accordance with the retrieved protocol (See page 12 paragraph 61 of Gagnon et al. for reference to SDP+ data store 540 that is a database storing SDP+ record information for multiple broadcast sessions and for reference to using data retrieved from the data store to process broadcast sessions).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. in view of Birdwell et al. (U.S. Pat. 6032197).

With respect to claim 8, Gagnon et al. does not specifically disclose a means for receiving head compression information.

With respect to claim 8, Birdwell et al., in the field of communications, discloses receiving header compression information (**See column 6 line 59 to column 7 line 52 of Birdwell et al. for reference to a receiver receiving header compression information**). Using header compression has the advantage of saving bandwidth in the transmission of data.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Birdwell et al., to combine using header compression, as suggested by Birdwell et al., with the system and method of Gagnon et al., with the motivation being to save bandwidth in the transmission of data.

7. Claims 17, 28, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. in view of Rustad et al. (U.S. Pat. 6775303).

With respect to claims 17, 28, and 45, Gagnon et al. does not disclose multiplexing a broadcast session protocol with a content of the broadcast session when the broadcast content bandwidth is low.

With respect to claims 17, 28, and 45, Rustad et al., discloses embedding control signaling with content data when the bandwidth requirement of the content data is low (**See column 4 line 66 to column 5 line 7 of Rustad et al. for reference to this process**). Embedding control signaling with content data when the bandwidth

requirement of the content data is low has the advantage of more efficiently using the complete bandwidth of a communication channel.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Gagnon et al., to combine embedding control signaling with content data when the bandwidth requirement of the content data is low, as suggested by Rustad et al., with the system and method of Gagnon et al., with the motivation being to more efficiently use the complete bandwidth of a communication channel.

8. Claims 21, 37-38, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon et al. in view of Matsui et al. (U.S. Pat. 6580756).

With respect to claims 21, 37, and 51, Gagnon et al. does not disclose requesting SDP information when the SDP information is not available at the receiving station.

With respect to claims 21, 37, and 51, Matsui et al., in the field of communications, discloses requesting SDP information when the SDP information is not available at the receiving station **(See column 13 lines 36-45 of Matsui et al. for reference to a receiver requesting for SDP information to be sent from a server).** Requesting SDP information when the SDP information is not available at the receiving station has the advantage of allowing a receiver station to actively request SDP information when the receiver station needs the SDP information to process a data stream.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Matsui et al., to combine requesting SDP information when the SDP information is not available at the receiving station, as suggested by Matsui et al., with the system and method of Gagnon et al., with the motivation being to allow a receiver station to actively request SDP information when the receiver station needs the SDP information to process a data stream.

With respect to claim 38, Gagnon et al. discloses retrieving the broadcast session protocol from a storage media (See page 12 paragraph 61 of Gagnon et al. for reference to SDP+ data store 540 that is a database storing SDP+ record information for multiple broadcast sessions including broadcast protocol information).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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